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मानक

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IS 7824 (1995): Quick change drill chucks, collets and floating reamer holders specification [PGD 2: Machine Tool Elements and Holding Devices]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

शीघ्र परिवर्त्य चक, कॉलेट तथा प्लवी रीमर
होल्डर — विशिष्ट

(पहला पुनरीक्षण)

Indian Standard

QUICK CHANGE DRILL CHUCKS, COLLETS
AND FLOATING REAMER HOLDERS —
SPECIFICATION

(*First Revision*)

ICS 25.100.30

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

September 1995

Price Group 3

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Machine Tools Elements and Holding Devices Sectional Committee had been approved by the Production Engineering Division Council.

This standard was first issued in 1975 based on the details supplied by the leading manufacturers of the product. Consequent upon the use of improved type of collets, this standard has been revised to include one more type of collets, namely 'open type collet' which has been designated as 'Type B' collets. The collets as per the earlier standard have been designated as 'Type A' collets. The details of open type collet have been taken from the leading users of the product.'

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

QUICK CHANGE DRILL CHUCKS, COLLETS AND FLOATING REAMER HOLDERS — SPECIFICATION

(First Revision)

1 SCOPE

This standard covers the requirements for quick change drill chucks, collets and floating reamer holders.

2 REFERENCES

2.1 The following standards contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	Title
1715 : 1986	Dimensions for self holding tapers (<i>second revision</i>)
2102 (Part 1) : 1993/ISO 2768-1 : 1989	General tolerances : Part 1 Tolerances for linear and angular dimensions without individual tolerance indications (<i>third revision</i>)
2898 : 1976	Steel balls for rolling bearings (<i>first revision</i>)
3403 : 1981	Dimensions for knurls (<i>revised</i>)

3 TERMINOLOGY

3.1 The various terms of a typical type of quick change drill chuck are as shown in Fig. 1.

4 TYPES

4.1 The quick change collets shall be as follows:

Type A — Quick change collets, close type.

Type B — Quick change collets, open type.

5 DIMENSIONS

5.1 Quick Change Drill Chucks

5.1.1 The dimensions of quick change drill chucks shall be as given in Table 1.

5.2 Quick Change Collets

5.2.1 The dimensions of quick change collets — Type A shall be as given in Table 2.

5.2.2 The dimensions of quick change collets — Type B shall be as given in Table 3.

5.3 Quick Change Floating Reamer Holders

5.3.1 The dimensions of quick change floating reamer holders shall be as given in Table 4.

6 MATERIAL

6.1 The material for quick change drill chucks, collets and floating reamer holders shall be a suitable medium carbon steel of tensile strength not less than 600 MPa.

6.2 The steel balls used shall conform to grade 200 of IS 2898 : 1976.

7 HARDNESS

The hardness of quick change drill chucks, collets and floating reamer holders shall be 55 to 59 HRC.

8 PACKING

Quick change drill chucks, collets and floating reamer holders shall be wrapped with moisture-proof paper and shall be packed in accordance with the best trade practices.

9 DESIGNATION

9.1 A quick change drill chuck of nominal size 34 shall be designated as:

Quick Change Drill Chuck — IS 7824-34

9.2 A quick change collet of Type A, nominal size 34 having morse taper 3 shall be designated as:

Quick Change Collet — IS 7824-A34 × 3

9.3 A quick change floating reamer holder of nominal size 34 having morse taper 3 shall be designated as:

Quick Change Floating Reamer Holder — IS 7824-34 × 3

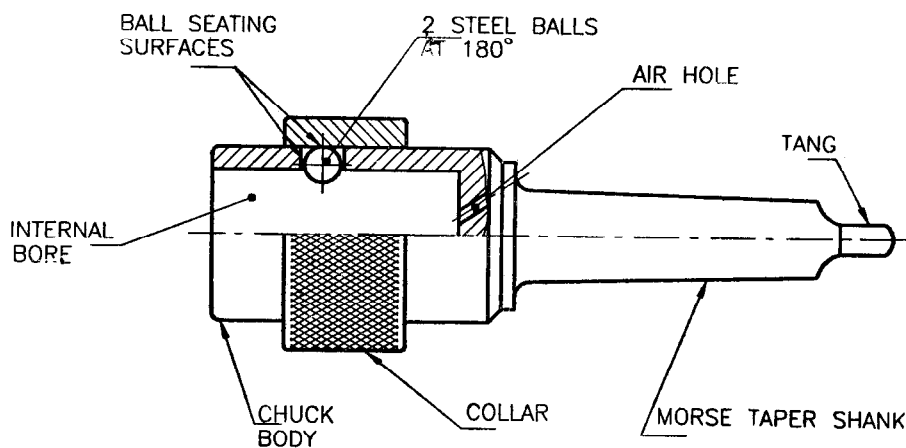


FIG. 1 QUICK CHANGE DRILL CHUCKS — TERMINOLOGY

10 MARKING

10.1 Quick change drill chucks shall be marked with nominal size and name or trade-mark of the manufacturer.

10.2 Quick change collets and floating reamer holders shall be marked with nominal size, morse taper number and name or trade-mark of the manufacturer.

10.3 BIS Certification Marking

Quick change drill chuck, collets and floating

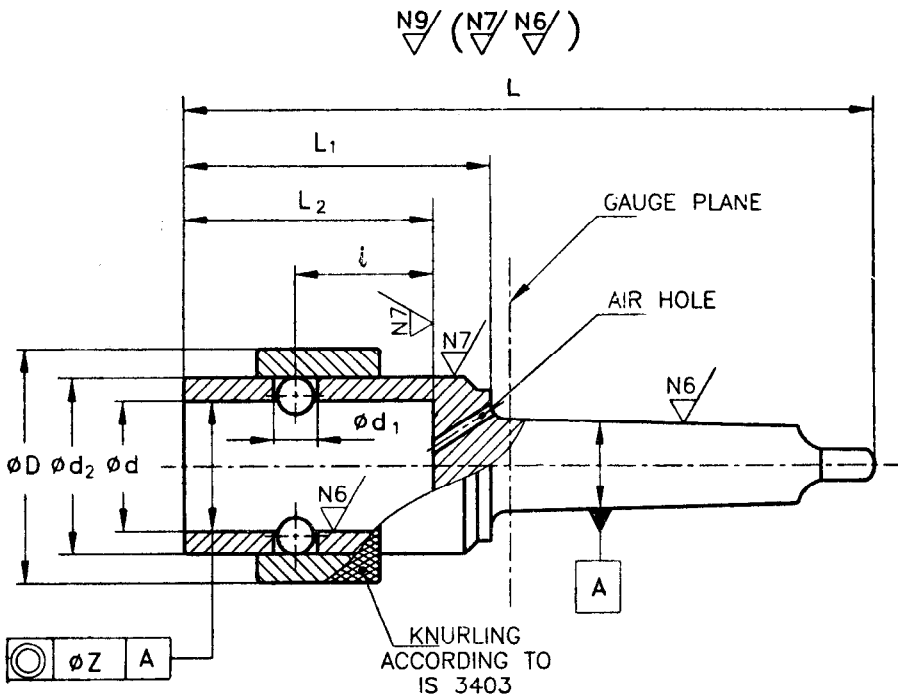
reamer holders may also be marked with the BIS Certification Mark.

10.3.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Table 1 Quick Change Drill Chucks

(Clause 5.1.1)

All dimensions in millimetres.



Nominal Size	Morse Taper	d H7	d_1	d_2	D Min	L Max	l ± 0.05	L_1 Approx	L_2 Max	Z
18	1	18	5.556	25	36	127	28	60	50	0.015
26	2	26	7.938	36	48	150	32	70	60	0.015
34	3	34	9.525	46	61	180	36	80	65	0.015
46	4	46	12.700	62	84	220	40	95	80	0.015
60	5	60	15.875	80	100	280	60	125	105	0.02

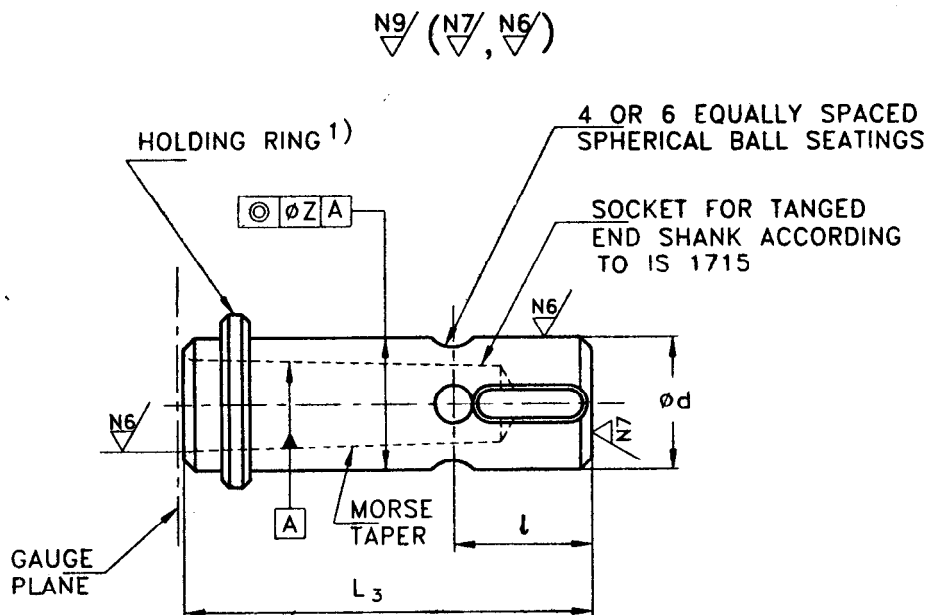
NOTES

- 1 Dimensional deviation for untoleranced dimensions : Medium class according to IS 2102 (Part 1) : 1993,
2 The figure is indicative of dimensions only and does not specify design features.

Table 2 Quick Change Collets — Type A

(Clause 5.2.1)

All dimensions in millimetres.



1) Suitable holding ring shall be provided

Nominal Size	Morse Taper	d f7	L_3 Approx	l ± 0.05	Z
18	0	18	70	28	0.015
	1		75		
26	1	26	78	32	0.015
	2		90		
34	1	34	80	36	0.015
	2		90		
	3		108		
46	1	46	102	40	0.015
	2		100		
	3		111		
	4		135		
60	2	60	130	60	0.02
	3		130		
	4		136		
	5		173		

NOTES

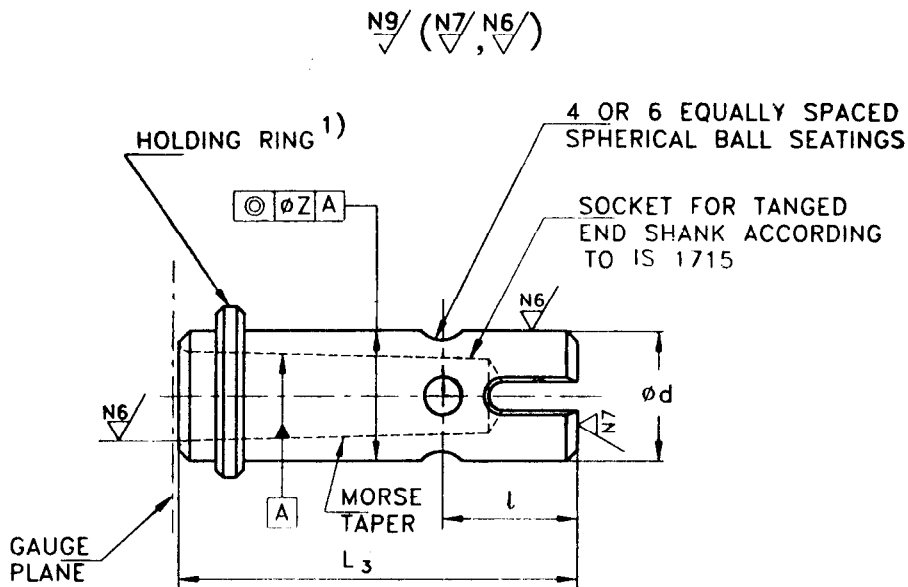
1 Dimensional deviation for untoleranced dimensions: Medium class according to IS 2102 (Part 1) : 1993.

2 The figure is indicative of dimensions only and does not specify design features.

Table 3 Quick Change Collets — Type B

(Clause 5.2.2)

All dimensions in millimetres.



¹⁾Suitable holding ring shall be provided

Nominal Size	Morse Taper	d f7	L ₃ Approx	l ± 0.05	Z
26	1	26	72	32	0.015
	2		82		
34	1	34	77	36	0.015
	2		82		
	3		102		
46	1	46	88	40	0.015
	2		91		
	3		103		
	4		125		
60	2	60	110	60	0.02
	3		125		
	4		140		
	5		155		

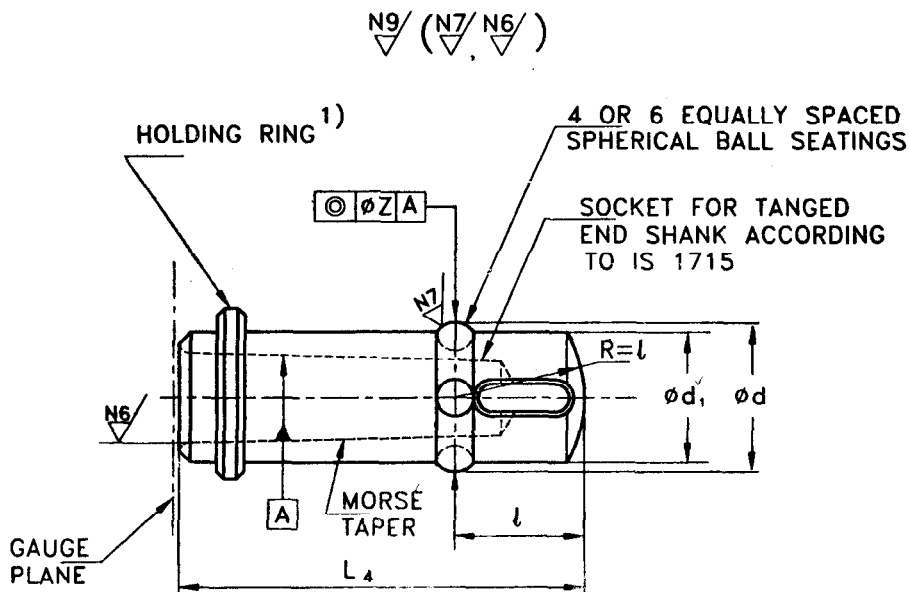
NOTES

1 Dimensional deviation for untoleranced dimensions: Medium class according to IS 2102 (Part 1) : 1993.

2 The figure is indicative of dimensions only and does not specify design features.

Table 4 Dimensions for Quick Change Floating Reamer Holders
(Clause 5.3.1)

All dimensions in millimetres.



¹⁾ Suitable holding ring shall be provided

Nominal Size	Morse Taper	d f7	d_1	L_4 Approx	l ± 0.05	Z
18	0	18	16	70	28	0.015
	1			75		
26	1	26	24	78	32	0.015
	2			90		
34	1	34	32	80	36	0.015
	2			90		
	3			108		
46	1	46	44	102	40	0.015
	2			100		
	3			111		
	4			135		
60	2	60	54	130	60	0.02
	3			130		
	4			136		
	5			173		

NOTES

1 Dimensional deviation for untoleranced dimensions: Medium class according to IS 2102 (Part 1) : 1993.

2 The figure is indicative of dimensions only and does not specify design features.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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